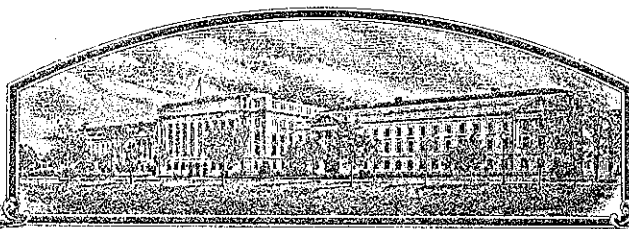


No.

9600063



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**Pioneer Hi-Bred International, Inc.**

Whereas, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW:

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF EIGHTEEN YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'9352'

*In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this thirty-first day of March in the year of our Lord one thousand nine hundred and ninety-eight.*

Attest:

*Thomas A. Salt*  
Acting Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*Don Glickman*  
Secretary of Agriculture

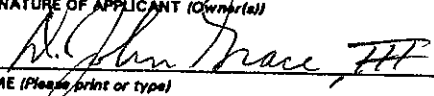
U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552e).

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

## APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Pioneer Hi-Bred International, Inc.			9352
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)		5. TELEPHONE (include area code)	FOR OFFICIAL USE ONLY PVPO NUMBER 9600063 DATE NOV. 22, 1995 FILING AND EXAMINATION FEE \$ 2450.00 DATE NOV. 22, 1995 CERTIFICATION FEE \$ 300 DATE 3/24/98
700 Capital Square 400 Locust St. Des Moines, IA 50309		515/270-3582	
7. GENUS AND SPECIES NAME		8. FAMILY NAME (Botanical)	
Glycine Max		Leguminosae	
9. CROP KIND NAME (Common name)			
Soybean			
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name)			
Corporation			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION	
Iowa		1926	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS		14. TELEPHONE (include area code)	
John Grace 7300 NW 62nd Ave. PO Box 1004 Johnston, IA 50131-1004		Mike Roth (copy) 700 Capital Square 400 Locust St. Des Moines, IA 50309	
		15. FAX (include area code)	
		515/253-2288	
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)			
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety			
b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness			
c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety			
d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety			
e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership			
f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository)			
g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)			
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(e) of the Plant Variety Protection Act)?			
<input type="checkbox"/> YES (If "yes," answer items 18 and 19 below) <input checked="" type="checkbox"/> NO (If "no," go to item 20)			
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?		19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?	
<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?			
<input type="checkbox"/> YES (If "yes," give names of countries and dates) <input checked="" type="checkbox"/> NO			
21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.			
The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.			
Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF APPLICANT (Owner(s))		SIGNATURE OF APPLICANT (Owner(s))	
			
NAME (Please print or type)		NAME (Please print or type)	
D. John Grace III			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Soybean Research Coordinator	11/16/95		

## Exhibit A: Origin and Breeding History

### Breeding History of 9352 Soybean

Pioneer soybean variety 9352 evolved from a cross of Pioneer variety 9341 x Pioneer Variety 9273. It is an F4 derived variety which was advanced to the F4 generation by modified single seed descent..

- 1987    The cross Pioneer variety 9341 x Pioneer variety 9273 was made in the fall greenhouse at the Pioneer Hi-Bred Int'l, Inc. soybean breeding station at St. Joseph, IL. It was assigned the cross number 9472.
- 1988    The population 9472 was cycled through the F4 generation in the Hawaii nursery. Single plants were pulled and returned to the Pioneer Hi-Bred Int'l, Inc. soybean research station at Napoleon, OH.
- 1989    F5 plant selections were grown in a short row yield test at Napoleon, OH. The plant selection to become 9352 was assigned the experimental number 9472N021.
- 1990    Pioneer experimental variety 9472N021 was grown in the NPC305 yield test at three locations and was designated as entry number 30.
- 1991    Pioneer experimental variety 9472N021 was grown in the NPA3B400 yield test as entry number 14. It was assigned the experimental number W9472N021.
- 1992    W9472N021 was grown in the NPA3L000 wide area yield test .
- 1993    W9472N021 was tested in the NPA3L000 wide area yield test. Progeny rows were grown at Napoleon, OH for purification. Selected rows were bulked and sent to Chile for winter increase. W9472N021 was assigned the experimental number XB36B.
- 1994    XB36B was tested in the NPA3E00 wide area yield test. Based upon yield performance was advanced and assigned the commercial number 9352. Parent seed produced 8850 bushels of pure seed.

9352 has undergone four years of extensive purification and testing, and has been observed by the breeders to be uniform and stable for all plant traits from generation to generation with no evidence of variants.

**Exhibit B: Novelty Statement**

Variety 9352 is most similar to Variety 9341. However, 9352 is significantly later in maturity than 9341. (Table 1)

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, MEAT, GRAIN & SEED DIVISION  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MARYLAND 20705

EXHIBIT  
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY  
SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) Pioneer Hi-Bred International, Inc.	TEMPORARY DESIGNATION	VARIETY NAME 9352
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) 700 Capital Square 400 Locust Street Des Moines, IA 50309		FOR OFFICIAL USE ONLY PVPO NUMBER 9600063

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g.,   ). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)  
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)

2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)  
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ 2. SEED COAT COLOR: (Mature Seed)

1 = Yellow

2 = Green

3 = Brown

4 = Black

5 = Other (Specify) \_\_\_\_\_

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Corsoy 79'; 'Braxton')

2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ 4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

★ 5. HILUM COLOR: (Mature Seed)

1 = Buff

2 = Yellow

3 = Brown

4 = Gray

5 = Imperfect Black

6 = Black

7 = Other (Specify) \_\_\_\_\_

★ 6. COTYLEDON COLOR: (Mature Seed)

1 = Yellow

2 = Green

★ 7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low

2 = High

★ 8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP1<sup>a</sup>)

2 = Type B (SP1<sup>b</sup>)

★ 9. HYPOCOTYL COLOR:

8/14 4 Sept. 1997  
2 ☒ 1

1 = Green only ('Evans'; 'Davis')

2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')

3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')

4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ 10. LEAFLET SHAPE:

1 = Lanceolate

2 = Oval

3 = Ovate

4 = Other (Specify) \_\_\_\_\_

## 11. LEAFLET SIZE:

☐ 21 = Small ('Amsoy 71'; 'A5312')  
3 = Large ('Crawford'; 'Tracy')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

## 12. LEAF COLOR:

☐ 21 = Light Green ('Weber'; 'York')  
3 = Dark Green ('Gnome'; 'Tracy')

2 = Medium Green ('Corsoy 79'; 'Braxton')

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## ★ 13. FLOWER COLOR:

☐ 1

1 = White

2 = Purple

3 = White with purple throat

## ★ 14. POD COLOR:

☐ 2

1 = Tan

2 = Brown

3 = Black

## ★ 15. PLANT PUBESCENCE COLOR:

☐ 2

1 = Gray

2 = Brown (Tawny)

## 16. PLANT TYPES:

☐ 21 = Slender ('Essex'; 'Amsoy 71')  
3 = Bushy ('Gnome'; 'Govan')

2 = Intermediate ('Amcor'; 'Braxton')

## ★ 17. PLANT HABIT:

☐ 3

1 = Determinate ('Gnome'; 'Braxton')

2 = Semi-Determinate ('Will')

3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

## ★ 18. MATURITY GROUP:

☐ 0 ☐ 61 = 000  
9 = VI2 = 00  
10 = VII3 = 0  
11 = VIII4 = I  
12 = IX5 = II  
13 = X

6 = III

7 = IV

8 = V

## ★ 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

## BACTERIAL DISEASES:

★ ☐ 0 Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)★ ☐ 1 Bacterial Blight (*Pseudomonas glycinea*)★ ☐ 0 Wildfire (*Pseudomonas tabaci*)

## FUNGAL DISEASES:

★ ☐ 1 Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojina*)★ ☐ 0 Race 1 ☐ 0 Race 2 ☐ 0 Race 3 ☐ 0 Race 4 ☐ 0 Race 5 ☐ Other (Specify)☐ 0 Target Spot (*Corynespora cassicola*)☐ 0 Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☐ 0 Powdery Mildew (*Microsphaera diffusa*)★ ☐ 1 Brown Stem Rot (*Cephalosporium gregatum*)☐ 0 Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

## 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

## FUNGAL DISEASES: (Continued)

- ★ ☒ 1 Pod and Stem Blight (*Diaporthe phaseolorum* var; *sojae*)
- ☐ 0 Purple Seed Stain (*Cercospora kikuchii*)
- ☒ 1 Rhizoctonia Root Rot (*Rhizoctonia solani*)
- Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)
- ★ ☒ 1 Race 1 ☒ 1 Race 2 ☒ 1 Race 3 ☒ 1 Race 4 ☒ 1 Race 5 ☐ 0 Race 6 ☒ 1 Race 7
- ☒ 1 Race 8 ☒ 1 Race 9 ☐ Other (Specify) \_\_\_\_\_

## VIRAL DISEASES:

- ☒ 1 Bud Blight (Tobacco Ringspot Virus)
- ☒ 1 Yellow Mosaic (Bean Yellow Mosaic Virus)
- ★ ☒ 1 Cowpea Mosaic (Cowpea Chlorotic Virus)
- ☒ 1 Pod Mottle (Bean Pod Mottle Virus)
- ★ ☒ 1 Seed Mottle (Soybean Mosaic Virus)

## NEMATODE DISEASES:

- Soybean Cyst Nematode (*Heterodera glycines*)
- ★ ☐ Race 1 ☐ Race 2 ☒ 1 Race 3 ☐ Race 4 ☐ Other (Specify) \_\_\_\_\_
- ☐ 0 Lance Nematode (*Hoplolaimus Colombus*)
- ★ ☐ 0 Southern Root Knot Nematode (*Meloidogyne incognita*)
- ★ ☐ 0 Northern Root Knot Nematode (*Meloidogyne Hapla*)
- ☐ 0 Peanut Root Knot Nematode (*Meloidogyne arenaria*)
- ☐ 0 Reniform Nematode (*Rotylenchulus reniformis*)
- ☐ OTHER DISEASE NOT ON FORM (Specify): \_\_\_\_\_

## 20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ★ ☒ 1 Iron Chlorosis on Calcareous Soil
- ☐ Other (Specify) \_\_\_\_\_

## 21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ☐ 0 Mexican Bean Beetle (*Epilachna varivestis*)
- ☐ 0 Potato Leaf Hopper (*Empoasca fabae*)
- ☐ 0 Other (Specify) \_\_\_\_\_

## 22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	9341	Seed Coat Luster	9273
Leaf Shape	9341	Seed Size	9273
Leaf Color	9341	Seed Shape	9341
Leaf Size	9341	Seedling Pigmentation	9341

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

9600063

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/POD
				CM Width	CM Length	% Protein	% Oil		
9352 Submitted	129.8	1.7	92.3	5.80	9.24	41.4	21.9	16.1	3
9341 Name of Similar Variety	128.7	1.8	93.3	5.67	9.57	42.3	22.1	16.4	3

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A<sub>2</sub> in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

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7





#### Exhibit D: Additional Description of Variety

In Exhibit C we have identified 9352 as susceptible to bacterial blight, brown spot, pod and stem blight, rhizoctonia root rot, bud blight, yellow mosaic, cowpea mosaic, pod mottle and seed mottle. This does not mean that we consider 9352 to be worse than other varieties of similar maturity in reaction to these challenges. Rather, we have chosen to be conservative and have identified 9352 as "susceptible".

Variety 9352 is a mid group III variety. If group III maturities are divided into tenths, the relative maturity of 9352 is 3.5.

#### Isozyme information for 9352:

ACO2	ACO3	ACO4	ACP	DIA	ENP	IDH1	IDH2	MDH	MPI	PGM1	PHI1
1	1	1	A	B	A	1	1	B	A	1	1

#### Exhibit E: Statement of the Basis of Applicants Ownership

Variety 9352 was originated and developed by plant breeders (U.S. nationals) from whom, by agreement, Pioneer Hi-Bred Int'l, Inc. has obtained exclusive rights to 9352. No rights to 9352 are retained by plant breeders or any other party.